

CommonZOOM for Thursday, October 26, 2023

Topic: Anatomy of an Airworthiness Directive (AD)

This ComancheZOOM becomes the first in a series of CommonZOOMs. We looked at the process by which an AD is issued by the FAA, paying particular attention to a recent Notice of Proposed Rulemaking (NPRM) affecting the chance of failure of the rudder post when a specific non-standard tail beacon was added to aircraft in Alaska. This NPRM invites comments from the pilot community as to their experiences with this modification.

Note: per FAA:

30,000 aircraft are affected at a \$93,000,000 estimated cost. There are ~200,000 aircraft US registered. This proposed AD is ~15% of the registered US Fleet. The AD would affect every rudder on every fabric covered Piper ever built except the PA-25. It includes those excluded under the SB.

Concerns include:

- High side loading, particularly on takeoff with higher powered engines. Put a strain gauge on a rudder and go to a calculated value (design load limit?) and see if it fails. Then go to failure.
- Failures are at the edge of a weld on the rudder post. The weld will cool too quickly, and the metal will get brittle.
- Another concern is the steel itself. The Chinese steel coming into this country has not been normalized and it is brittle.

Pilots and owners are encouraged to review the NPRM at <https://public-inspection.federalregister.gov/2023-22259.pdf>

In a continuation of this Zoom other AD processes will be discussed as examples of the effect of pilot community input that reduces or eliminates the scope of the proposed AD.

To see/hear the recordings click on a link below:

- <http://meetings.northeastcomanche.org/zoom/2023-10-26/video.mp4>
- <http://meetings.northeastcomanche.org/zoom/2023-10-26/audio.m4a>

To read the Chat text click on this link:

- <http://meetings.northeastcomanche.org/zoom/2023-10-26/chat.txt>

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